

10/941, 688 (2157)

60 claims
1-8, 10-12, 14-76, 39-64
16, 1d

Application Serial No. 10/662,738

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- Approved
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entry
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08/12/05
- = 1. (Previously Presented) A document processing device, comprising:
- an input receptacle adapted to receive at least two batches of documents, each batch including currency bills and a header card, each header card bearing source identification information identifying the source of the currency bills in the respective batch;
 - at least one output receptacle adapted to receive the currency bills after the currency bills have been processed, and adapted to receive the header card;
 - a transport mechanism adapted to transport the currency bills, one at a time, from the input receptacle to the at least one output receptacle along a transport path;
 - an evaluation unit adapted to evaluate the currency bills and distinguish header cards from currency bills;
 - memory coupled to the evaluation unit for storing batch document information based on evaluating the at least two batches of documents;
 - a data entry interface for entering into memory source identification information from the header cards, wherein the source identification information is entered into memory before or after evaluating all batches of documents; and
 - a controller coupled to the evaluation unit, the controller being adapted to control operation of the transport mechanism, to control operation of the evaluation unit, and to associate, on a sequential basis, source identification information in memory with batch document information in memory.
2. (Currently Amended) A method of processing at least two batches of documents, comprising the acts of:
- receiving and evaluating at least two batches of documents;

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receiving source identification information from a separator card for each batch on sequential basis before, or after, evaluating documents in the at least two batches;

transporting each of the documents, one document at a time, past a document detector to evaluate each document;

obtaining batch document information for each batch based on evaluating documents in each respective batch; and

associating, on a sequential basis, batch document information for each batch with source identification information for each batch.

3. (Currently Amended) A method of processing multiple batches of documents including currency bills and a header card, comprising the acts of:

capturing source identification information on a header card in a batch of documents including currency bills to identify the source of the currency bills in the batch of documents;

removing the header card from the batch of documents;

placing the currency bills without the header card in an input receptacle of a document processing device;

transporting each of the currency bills, one bill at a time, past a currency detector;

evaluating each currency bill to obtain characteristic information associated with a currency bill;

determining whether each currency bill meets or fails at least one criterion;

directing each currency bill to at least one output receptacle based on the determining act;

and

directing a separator card to at least one output receptacle to separate documents from consecutive batches.

4. (Previously Presented) A method of processing at least two batches of documents, each of the batches including a header card and currency bills, comprising the acts of:

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providing at least two batches of documents, each batch including a header card and currency bills associated therewith, each header card including source identification information representative of the source of the currency bills in the batch of documents;

positioning each header card at a predetermined position in each respective batch of documents;

placing the batches of documents in an input receptacle of a document processing device;

entering into memory of the processing device source identification information from each header card; and

processing substantially all documents from at least two batches before or after entering the source identification information from each batch into memory.

5. (Currently Amended) A method of processing at least two batches of documents, comprising the acts of:

entering into memory of a document processing device source identification information from a separator card for at least two batches of documents in a sequence;

loading the at least two batches into the document processing device for multiple batch processing in a sequence consistent with the sequence in which the source identification information is was entered into memory; and

after the act of entering the source identification information from a separator card for the at least two batches into memory, initiating the transport of the batches in a sequence consistent with the sequence in which the source identification information was entered into memory, one document at a time, through the document processing device to obtain characteristic information from the documents in the at least two batches;

wherein, the document processing device is adapted to determine ~~the~~ batch information for each of the at least two batches based on the obtained characteristic information and match on a sequential basis the batch information to the source identification information for each of the at least two batches.

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6. (Previously Presented) The method of Claim 5, wherein each batch contains a header card and;

entering the source identification information for each of the at least two batches from the header cards before the act of loading the at least two batches into the document processing device.

7. (Previously Presented) The method of Claim 6, comprising the act of removing the header cards from the at least two batches before the act of initiating the transport of the at least two batches through the document processing device.

8. (Previously Presented) The method of Claim 7, comprising the act of replacing at least one header card with a separator card to separate the at least two batches when the at least two batches are loaded into the document processing device.

~~9.~~ (Cancelled)

10. (Currently Amended) The method of Claim ~~9~~ 9, comprising the act of successively entering characteristic information for the rejected documents from the first and second batches such that after batch information for the batches are matched with the source identification information, the batch information for each batch reflects the entered characteristic information for the rejected documents.

11. (Previously Presented) The method of Claim 10, wherein the act of successively entering characteristic information for the rejected documents comprises reloading the rejected documents into the document processing device for reprocessing.

12. (Previously Presented) The method of Claim 7, comprising the act of, after the act of removing the header cards, the act of loading the at least two batches without the header cards into the document processing device such that a paddle of the document processing device separates the at least two batches.

~~13.~~ (Cancelled)

~~12~~ ~~14.~~ (Previously Presented) The method of Claim 6, wherein the act of loading the at least two batches into the document processing device with at least one of the two header cards such that the header card separates the at least two batches; and further comprising the acts of:

transporting the header card separating the at least two batches to an output receptacle; and
transporting rejected documents to the output receptacle such that the header card separating the at least two batches separates rejected documents from the first batch from rejected documents from the second batch, wherein the source identification information for each of the at least two batches is entered into memory of the document processing device before transporting the rejected documents to the output receptacle.

~~13~~ ~~15.~~ (Previously Presented) The method of Claim 5, comprising the act of retrieving from an output receptacle of the document processing device rejected documents, wherein the rejected documents from a first batch are separated from rejected documents of a second batch by a separator card printed by the document processing device during the multiple batch processing.

~~19~~ ~~=~~ ~~16.~~ (Previously Presented) A method of processing at least two batches of documents, comprising the acts of:

loading the at least two batches into a document processing device for multiple batch processing;

starting transportation of the batches in a sequence, one document at a time, through the document processing device to obtain characteristic information from at least some of the documents in the at least two batches;

determining batch information for each of the at least two batches based on the obtained characteristic information;

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after the act of determining batch information for each of the at least two batches, entering source identification for each batch into memory in a sequence consistent with the sequence in which the at least two batches were transported through the document processing device; and

matching on a sequential basis the batch information for each of the at least two batches with the source identification information for each of the at least two batches.

15 17. (Previously Presented) The method of Claim 16, wherein the act of loading the at least two batches comprises the act of loading the at least two batches with at least one separator card separating the at least two batches.

16 18. (Previously Presented) The method of Claim 17, comprising the act of directing the separator card to a reject receptacle.

17 19. (Previously Presented) The method of Claim 18, comprising the act of obtaining source identification information for one of the at least two batches from the separator card.

18 20. (Previously Presented) The method of Claim 16, comprising the acts of:
transporting reject documents from the at least two batches of documents to a reject receptacle;
printing a separator card; and
transporting the separator card to the reject receptacle to separate reject documents from one batch from reject documents from the other batch.

19 21. (Currently Amended) The method of Claim 16, wherein the act of entering source identification information for each batch comprises the act of bar code scanning a plurality of header cards respectively associated with the at least two batches.

20 22. (Previously Presented) The method of Claim 21, comprising the act of keying into memory information regarding rejected documents associated with a first of the at least two batches

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before the act of bar code scanning the header card associated with a second of the at least two batches.

21 23. (Previously Presented) The method of Claim 16, comprising the act of prompting an operator to enter the source identification information associated with a first of the at least two batches after the documents from both the first and second of the at least two batches have been transported through the document processing device.

22 24. (Previously Presented) A method of processing at least two batches of documents, the method comprising the acts of:

loading the at least two batches into a document processing device for multiple batch processing;

transporting the at least two batches in a sequence, one document at a time, through the document processing device to obtain characteristic information from some of the documents;

transporting rejected documents to a reject receptacle;

printing a separator card while multiple batch processing the at least two batches; and

transporting the separator card to the reject receptacle to separate rejected documents from one of the at least two batches from rejected documents from another of the at least two batches.

23 25. (Previously Presented) The method of Claim 24, comprising the act of entering source identification information associated with each batch into memory before the act of transporting the at least two batches through the document processing device, wherein the information is entered in a sequence consistent with the sequence in which the batches will be transported through the document processing device.

24 26. (Previously Presented) The method of Claim 25, further comprising the act of printing on the separator card source identification information associated with at least one of the one batch and the other batch.

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- 26 27. (Previously Presented) The method of Claim 24, comprising the act of loading the at least two batches into the document processing device with two respectively associated header cards, wherein at least one of the cards separates one batch from the other batch prior to the act of transporting the batches through the document processing device.
- 26 28. (Previously Presented) The method of Claim 27, comprising the act of transporting the two header cards to another reject receptacle separate from the reject receptacle receiving the separator card.
- 27 29. (Previously Presented) The method of Claim 28, comprising the act of obtaining source identification information for the at least two batches from the two header cards after the two header cards have been transported to the other receptacle.
- 27 30. (Previously Presented) The method of Claim 29, comprising the act of entering into memory of the document processing device the source identification information for the at least two batches in a sequence consistent with the sequence in which the at least two batches were transported through the document processing device.
- 29 31. (Previously Presented) The method of Claim 24, comprising the act of entering into memory of the document processing device source identification information for each of the at least two batches, wherein the information is entered in a sequence consistent with the sequence in which the at least two batches were transported through the document processing device.
- 29 32. (Previously Presented) The method of Claim 24, wherein the act of loading the at least two batches into the document processing devices comprises the act of positioning the batches such that a paddle of the processing device separates the at least two batches, and the paddle is allowed to advance during multiple batch processing.

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31 33. (Previously Presented) A method of processing at least two batches of documents, the method comprising the acts of:

capturing information on a bar code card associated with a first batch of documents to enter into memory of a document processing device source information indicating a source associated with the first batch of documents;

loading the first batch of documents into the document processing device;

capturing information on a bar code card associated with a second batch of documents to enter into memory of the document processing device source information indicating a source associated with the second batch of documents;

loading the second batch of documents into the document processing device;

after the act of capturing information on the bar code card associated with the first batch and the bar code card associated with the second batch, causing the document processing device to sequentially transport the first and second batches, one document at a time, through the document processing device;

whereby the document processing device obtains characteristic information from a plurality of the documents of the first batch and from a plurality of the documents of the second batch to determine batch information for the first batch and batch information for the second batch; and

whereby the document processing device matches on a sequential basis source information associated with the first batch with batch information associated with the first batch.

32 34. (Currently Amended) In a document processing device, a method of processing at least two batches of documents, comprising the acts of:

storing in memory a first source identification information associated with a first batch of documents from a first separator card;

storing in memory a second source identification information associated with a second batch of documents from a second separator card;

after the acts of storing the first and second source identification information in memory, transporting the first and second batches, one document at a time, past at least one detector to obtain characteristic information from the documents;

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determining first batch information associated with the first batch based on characteristic information obtained from documents from the first batch;

determining second batch information associated with the second batch based on characteristic information obtained from documents in the second batch; and

matching, on a sequential basis, the first batch information with the first source identification information and the second batch information with the second source identification information.

35. (Previously Presented) In a document processing device, a method of processing at least two batches of documents, comprising the acts of:

transporting a first batch and a second batch of documents, one document at a time, through an evaluation region to obtain characteristic information from the documents;

determining first batch information associated with the first batch based on characteristic information obtained from documents from the first batch;

determining second batch information associated with the second batch based on characteristic information obtained from documents from the second batch;

after the acts of determining the first and second batch information, receiving in memory first source information associated with the first batch of documents; and

matching, on a sequential basis, the first batch information with the first source information.

36. (Currently Amended) A document processing device for multiple batch processing, comprising:

an input receptacle adapted to hold at least two batches of documents and advance the two batches within the input receptacle;

one or more ~~an~~ output receptacles adapted to receive the documents after the documents have been processed;

a transport mechanism adapted to transport the documents, one at a time, from the input receptacle to the one or more output receptacles;

an evaluation unit adapted to evaluate the documents, wherein the transport mechanism transports the documents past the evaluation unit;

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memory coupled to the evaluation unit being adapted to store batch document information for each of the at least two batches based on evaluating the documents, the memory being adapted to store source identification information for each of the at least two batches;

a data entry interface for entering into memory the source identification information from a separator card for each of the at least two batches; and

a controller comprising programming adapted to match, on a sequential basis, the source identification information for each of the at least two batches with batch document information for each of the at least two batches;

wherein the source identification information for each of the at least two batches is stored in the memory before the batch document information for each batch is stored, and the programming is adapted to sequentially step through the source identification information for each of the at least two batches.

37. (Cancelled)

38. (Cancelled)

39. (Original) The device of Claim 36, wherein the input receptacle comprises a movable paddle that advances during multiple batch processing.

40. (Original) The device of Claim 36, comprising a reject output receptacle connected to the transport mechanism to receive rejects.

41. (Currently Amended) The device of Claim 40, comprising a mechanism adapted to send a separator card to the reject output receptacle to separate rejects from different batches of documents.

42. (Previously Presented) The device of Claim 41, wherein said mechanism comprises a printer.

39 43. (Currently Amended) A document processing device for multiple batch processing, comprising:

an input receptacle adapted to hold at least two batches of documents;

a plurality of output receptacles;

a transport mechanism adapted to transport the documents, one at a time, from the input receptacle to the plurality of output receptacles;

an evaluation unit adapted to evaluate the documents, wherein the transport mechanism transports the documents past the evaluation unit and the documents are sorted into the plurality of output receptacles based on evaluation of the documents;

memory coupled to the evaluation unit being adapted to store batch document information for each of the at least two batches based on evaluating the documents and being adapted to store source identification information for each of the at least two batches;

a data entry interface for entering into memory the source identification information from a respective separator card for each of the at least two batches; and

a controller comprising programming for:

storing the source identification information received from the data entry interface for each of the at least two batches into memory before transporting the at least two batches past the evaluation unit, and;

sequentially stepping through the source identification information in memory to match, on a sequential basis, the source identification information for each of the at least two batches with the batch document information for each of the at least two batches.

40 44. (Currently Amended) A document processing device for multiple batch processing, comprising:

an input receptacle adapted to hold at least two batches of documents;

a plurality of output receptacles adapted to receive the documents after the documents have been evaluated;

a transport mechanism adapted to transport the documents, one at a time, from the input receptacle to the plurality of output receptacles;

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an evaluation unit adapted to evaluate the documents, wherein the transport mechanism transports the documents past the evaluation unit and the documents are sorted into the plurality of output receptacles based on evaluation of the documents;

a data entry interface for entering into memory the source identification information from a respective separator card for each of the at least two batches;

memory coupled to the evaluation unit being adapted to store batch document information for each of the at least two batches based on evaluating the documents and being adapted to store source identification information received from the data entry interface for each of the at least two batches; and

~~a data entry interface for entering into memory the source identification information for each of the at least two batches; and~~

a controller adapted to store the batch document information for each of the at least two batches into memory before the source identification information for each of the at least two batches, and

sequentially step through the batch document information in memory to match, on a sequential basis, the batch document information for each of the at least two batches with the source identification information for each of the at least two batches.

A / 45. (Previously Presented) A document processing device for multiple batch processing comprising:

an input receptacle adapted to hold at least two batches of documents;

a plurality of output receptacles;

a transport mechanism adapted to transport the documents, one at a time, from the input receptacle to at least one of the plurality of output receptacles;

an evaluation unit adapted to evaluate the documents, wherein the transport mechanism transports the documents past the evaluation unit;

memory coupled to the evaluation unit adapted to store batch document information for each of the at least two batches based on processing the documents, and being adapted to store source identification information for each of the at least two batches;

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a bar code gun coupled to the memory for entering the source identification information into memory; and

a controller coupled to the memory and comprising programming for:

allowing the source identification information for the at least two batches to be entered into memory before the at least two batches are transported past the evaluation unit, and

sequentially stepping through the source identification information stored in memory to match batch document information with source identification information.

46. (Previously Presented) The document processing device of Claim 45, comprising a user interface for keying-in information regarding reject documents.

47. (Previously Presented) The document processing device of Claim 45, wherein the controller further comprises programming for allowing the source identification information for the at least two batches to be entered after the at least two batches are transported past the evaluation unit.

48. (Original) The document processing device of Claim 47, wherein the controller comprises programming for sequentially stepping through the batch document information for the at least two batches stored in memory to match batch document information with source identification information.

49. (Original) The document processing device of Claim 45, wherein the controller comprises programming for advancing the at least two batches in the input receptacle during multiple batch processing.

50. (Previously Presented) The document processing device of Claim 45, wherein the plurality of output receptacles include a reject output receptacle coupled to the transport mechanism to receive reject documents.

47 ~~51~~. (Previously Presented) The document processing device of Claim 50, comprising a printer adapted to print on a separator card, wherein the controller comprises programming for sending the separator card to the reject output receptacle to separate rejects from different batches.

48 ~~52~~. (Previously Presented) A method of processing multiple batches of documents including currency bills and a header card, comprising the acts of:

capturing source identification information on a header card in a batch of documents including currency bills to identify the source of the currency bills in the batch of documents;

placing the currency bills with the header card in an input receptacle of a document processing device;

transporting the header card to an offsort receptacle;

transporting each of the currency bills, one bill at a time, past a currency detector;

evaluating each currency bill to obtain characteristic information associated with a currency bill;

determining whether each currency bill meets or fails at least one criterion;

directing each currency bill to at least one output receptacle based on the determining; and

directing a separator card to at least one output receptacle to separate documents from consecutive batches.

49 ~~53~~. (Previously Presented) The method of claim 52, further comprising the act of comparing the source identification information to an information library.

50 ~~54~~. (Original) The method of claim 53, wherein said information library is a database.

51 ~~55~~. (Original) The method of claim 53, wherein said information library is stored in the document processing device.

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52 56. (Previously Presented) The method of claim 53, further comprising the act of remotely accessing information from the information library.

53 57. (Previously Presented) The method of claim 52, wherein the act of placing is carried out using a cartridge.

54 58. (Previously Presented) The method of claim 52, further comprising the act of printing a set of characters on at least one of the header card, the separator card, and a document from the batch of documents.

55 59. (Previously Presented) A document processing device for multiple batch processing, comprising:

an input receptacle adapted to hold at least two batches of documents and advance the two batches within the input receptacle;

an output receptacle;

a transport mechanism adapted to transport the documents, one at a time, from the input receptacle to the output receptacle;

an evaluation unit adapted to evaluate the documents, wherein the transport mechanism transports the documents past the evaluation unit;

memory coupled to the evaluation unit being adapted to store batch document information for each of the at least two batches based on evaluating the documents, the memory being adapted to store source identification information for each of the at least two batches;

a data entry device for entering into memory the source identification information for each of the at least two batches; and

a controller comprising programming for matching, on a sequential basis, the source identification information for each of the at least two batches with batch document information for each of the at least two batches;

wherein the batch document information for each batch is stored in memory before the source identification information for each of the at least two batches and the programming for

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matching comprises programming for sequentially stepping through the batch document information for each batch.

60. (Currently Amended) A method of processing at least two batches of documents, comprising the acts of:

receiving into memory of a document processing device source identification information from a respective separator card for at least two batches of documents in a sequence;

after the act of receiving the source identification information for the at least two batches into memory, begin transporting the batches in a sequence consistent with the sequence in which the source identification information was received into memory, one document at a time, through the document processing device to obtain characteristic information from the documents in the at least two batches;

determining the batch information for each of the at least two batches based on the obtained characteristic information; and

matching on a sequential basis the batch information for each of the at least two batches with the source identification information for each of the at least two batches.

61. (Previously Presented) The method of Claim 60, further comprising the act of transporting a separator card adapted to separate the at least two batches to an output receptacle of the document processing device and the act of transporting rejected documents to the output receptacle such that the separator card separates rejected documents from a first batch from rejected documents from a second batch.

62. (Previously Presented) The method of Claim 34, wherein the first batch information comprises the total value of the first batch.

63. (Previously Presented) The method of Claim 62, wherein the first batch information further comprises the total number of documents within the first batch.

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~~60~~ ~~64~~. (Previously Presented) The method of Claim 34, wherein the first batch source identification information comprises information regarding a device the batch was taken from.

65.-73. (Cancelled)